REMARKS/ARGUMENTS

The rejections presented in the Office Action dated March 9, 2005 (hereinafter Office Action) have been considered. Claims 1-20 remain pending in the application. Claim 1 has been amended to more clearly indicate, for purposes of the invention set forth in Claim 1, that the second network node alters its congestion processing to mitigate the effect of in response to the QoS action taken by the first network node, as supported on page 17, line 28 of the instant application. Reconsideration of the pending claims and allowance of the application in view of the present response is respectfully requested.

Claims 1-2 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. 2003/0112756 to *Le Gouriellec et al.* (hereinafter *Le Gouriellec*). The Applicants respectfully traverse the anticipation rejection. To anticipate a claim the reference must teach every element of the claim, and it is respectfully submitted that *Le Gouriellec* does not meet this standard.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP 2131, quoting *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the patent claim; *i.e.* every element of the claimed invention must be literally present, arranged as in the claim." MPEP 2131, quoting *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The Applicants submit that *Le Gouriellec* does not teach every element of independent Claim 1 as amended, nor of Claim 2 as originally filed, and therefore fails to anticipate Claims 1 and 2.

Claims 1 and 2 are directed to distributing Quality of Service (QoS) information among network entities. It is first noted that *Le Gouriellec* describes a network that uses connections defined between network edge nodes (*Le Gouriellec* at [0021]). An edge node in *Le Gouriellec* marks oversubscribed traffic flows at an edge node and marks traffic that is oversubscribed but not dropped locally (*id* at [0028]). The traffic that is marked at the edge nodes may be dropped by interior nodes due to congestion, while the unmarked traffic is

never dropped by interior nodes (*id* at [0029]). In contrast, in the Applicants' invention, a data stream may be monitored for congestion on any node in the network, and if a QoS action is performed on the data stream at a first node, this action is communicated to subsequent nodes so that the subsequent nodes can mitigate the effect of the QoS action taken at the first node. The system of *Le Gouriellec* at least fails to describe or suggest any mitigation of the effects or previously applied QoS actions.

Generally, *Le Gouriellec* describes a system where interior nodes of a network make purely local decisions to apply QoS actions based on a markings applied at the edge nodes. (*see, e.g., Le Gouriellec* at [0029]). The edge node marking of *Le Gouriellec* is not in itself a QoS action, because it does not limit, delay, or otherwise affect the marked packets. Therefore, any QoS actions taken by interior nodes are not in response to a QoS action taken by the edge nodes because the edge nodes do not apply any QoS actions. In addition, *Le Gouriellec* fails to describe any mechanism for communicating between interior nodes QoS actions taken by the interior nodes. It follows then, that any QoS actions taken by internal nodes are local in scope, and cannot be made to mitigate prior QoS actions, because *Le Gouriellec* does not describe any mechanism for communicating such actions. *Le Gouriellec* thus at least fails to describe this feature of Claims 1 and 2, and therefore does not anticipate Claims 1 or 2. Applicants respectfully submit, then, that Claims 1 and 2 are in condition for allowance.

Claims 1-3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,714,517 to *Fawaz et al.* (hereinafter *Fawaz*). The Applicants respectfully traverse this rejection. According to MPEP §2142, to establish a *prima facie* case of obviousness under 35 U.S.C. §103:

1) there must be some suggestion or motivation either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;

2) there must be a reasonable expectation of success; and

3) the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applicants respectfully submit that the *Fawaz*, even if modified as set forth in the Office Action, does not teach each and every claim limitation of Claims 1-3, and consequently *prima facie* obviousness has not been established. *Fawaz* describes a packet-switch network that provides QoS for dedicated communications channels between switches. In particular, *Fawaz* uses a congestion control technique referred to as Distributed Back Pressure (DBP). Using DBP, nodes in the network of maintain lists of congested connections (col. 11, lines 19-21). The connections in *Fawaz* are referred to as Service Level Agreements (SLA). Each node sends messages to neighboring nodes informing the neighboring nodes that there is congestion on one or more SLA's (col. 11, lines 27-29). Based on these messages, the upstream node stops transmitting packets on the congested SLA, or at least reduces the bandwidth used for the congested SLA (col. 11, lines 33-35).

The communications between neighboring nodes in *Fawaz* are merely used to throttle congested SLAs upstream. Even if this were construed as performing a QoS action at one network entity and then communicating that action to another network entity, this does not describe any actions that more fairly apply QoS actions as between multiple streams, so as to mitigate the effects of upstream QoS actions. In Claims 1-3, a QoS action is performed on the data stream at a first node, this action is communicated to subsequent nodes so that the subsequent nodes can mitigate the effect of the QoS action taken at the first node. This is not taught or suggested in *Fawaz* because *Fawaz* is not concerned with more fairly applying actions on data streams that have already have QoS actions applied. Quite the opposite, the DBP scheme described in *Fawaz* will *increase* the deleterious effects of upstream QoS actions on individual streams rather than mitigate those actions. For example, in col. 11, lines 31-35, *Fawaz* describes a scheduler within the node as skipping the sending of packets from a congested SLA queue. In addition to this action, *Fawaz* also describes sending a message to the upstream node that an SLA is congested, so that the upstream node can stop or reduce the transmission of packets on that SLA (see, e.g., *Fawaz* col. 11, lines 45-49). Therefore, an SLA that has packets delayed in the first node will have further throttling actions performed upstream that will further affect the data stream. As set forth in *Fawaz*, this scheme allows one SLA in a data link from being

reduced without stopping traffic on the link, thus not impacting other non-congested SLA's in the same data link (see, e.g., col 12, lines 33-41). The goal of the DBP of *Fawaz* is finer grained control of QoS actions on data streams, and *Fawaz* is silent regarding more fairly applying these actions between data streams to mitigate the effects of an action already applied on a stream, as required in Claims 1-3. In the Applicants' invention, this mitigating application of QoS actions can be used to reduce the net effect of QoS actions applied to multiple congested streams, so that one congested data stream does not necessarily take the brunt of QoS actions applied at successive nodes. The Applicants' invention allows nodes to work together to more fairly distribute QoS actions applied on multiple congested streams, and this is neither taught nor suggested in *Fawaz*. Therefore, *Fawaz* does not teach or suggest every claim limitation of the Applicants' invention, and a *prima facie* case of obvious cannot be established. The Applicants' respectfully submit, therefore, that Claims 1-3 are in condition for allowance.

Claims 13-16 stand rejected under 35 U.S.C. §103(a) as being obvious over *Le Gouriellec*. The Applicant respectfully traverses this rejection. Applicants respectfully submit that the *Le Gouriellec*, even if modified as set forth in the Office Action, does not teach each and every claim limitation of Claims 13-16, therefore a *prima facie* case of obviousness has not been established.

Claim 13 is directed to a communication device containing a routing unit capable of receiving signalling indicative of prior Quality of Service (QoS) actions taken on a plurality of data streams. The device includes a QoS unit that is adapted to act on packets of data from the plurality of data streams whose signalling indicates a lack of prior QoS actions. Therefore, analogous to Claim 1, the QoS unit of Claim 13 acts to mitigate the effects of prior QoS actions performed on congested data streams by performing QoS actions on those data streams that have not yet had any QoS actions performed on them. As set forth in more detail above, *Le Gouriellec* fails to teach or suggest any signaling that indicates a prior QoS action was taken place, nor does *Le Gouriellec* describe a node acting on data streams whose signalling indicates a lack of prior QoS actions.

As previously set forth, *Le Gouriellec* merely marks packets at an edge node without performing any QoS actions at those packets. The QoS actions in *Le Gouriellec* occur at interior nodes, and *Le Gouriellec* is silent on any communication between interior node that QoS actions are applied. Therefore, *Le Gouriellec* does not teach or suggest signaling that indicates a prior QoS action took place on a data stream. Because *Le Gouriellec* does not teach or suggest this signaling, it follows logically that *Le Gouriellec* cannot teach or suggest taking QoS actions based on such signaling. Therefore, *Le Gouriellec* does not teach or suggest every claim limitation of the Applicants' invention, and a *prima facie* case of obvious cannot be established. The Applicants' respectfully submit, therefore, that Claim 13 is in condition for allowance.

Dependent Claims 2-3 and 14-16 are dependent from independent Claims 1 and 13, respectively. Claim 2 stands rejected under 35 U.S.C. §102(e) as being anticipated by *Le Gouriellec*, Claims 2-3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Fawaz*, and Claims 14-16 stand rejected under 35 U.S.C. §103(a) as being obvious over *Le Gouriellec*. While Applicant does not acquiesce with the particular rejections to these dependent claims, these rejections are now moot in view of the remarks made in connection with independent Claims 1 and 13. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references. Therefore, dependent Claims 2-3 and 14-16 are also in condition for allowance.

Claims 3-12 and 17-20 stand rejected under 35 U.S.C. §103(a) as being obvious over *Le Gouriellec* as applied to Claims 1-2 and 13-16 above, and further in view of U.S. Publication No. 2004-0090917 to *Ruutu et al.* (hereinafter *Ruutu*). Applicant respectfully traverses the rejection.

While not acquiescing to the particular rejections to these claims, Applicant respectfully brings to the Examiner's attention that the secondary reference, *Ruutu*, is not a qualified reference under 35 U.S.C. § 102 and, therefore, is not available under 35 U.S.C. § 103. As such, *Ruutu* cannot properly be used as a reference to support the Examiner's rejection of claims 3-12 and 17-20 under 35 U.S.C. § 103.

Applicant respectfully notes that inventorship of the instant application and the *Ruutu* reference is the same. Further, both the instant application and *Ruutu* are assigned to a common assignee. Applicant makes reference to the assignee of record for *Ruutu* (recorded at reel 014776, frame 0591) and the assignee of record information for the instant application (recorded at reel 014939, frame 0641) to evidence such common ownership.

Applicant's claimed invention was not known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by Applicant for patent. As such, *Ruutu* is not a qualified reference under 35 U.S.C. § 102(a). Applicant's claimed invention was not patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more that one year prior to the date of Applicant's application for patent in the U.S. Accordingly, *Ruutu* is not a qualified reference under 35 U.S.C. § 102(b).

Applicant's claimed invention was not described in an application for patent (published under section 122(b)) nor described in a patent granted on an application for patent by another in the U.S. before the invention by Applicant for patent. As such, *Ruutu* is not a qualified reference under 35 U.S.C. § 102(e). Further, *Ruutu* is not a qualified reference under 35 U.S.C. § 102(d) nor any other provision of 35 U.S.C. § 102. Accordingly, *Ruutu* is not a reference available to support a rejection of Applicant's claimed subject matter under 35 U.S.C. § 103.

For at least the above-stated reasons, Applicant respectfully requests withdrawal of the rejection of claims 12-15 and 18-20 under 35 U.S.C. § 103(a). As admitted in the Office Action, the primary reference *Le Gouriellec* standing alone neither anticipates nor renders obvious Applicant's Claims 3-12 and 17-20. Therefore, Applicant respectfully submits that Claims 3-12 and 17-20 are in condition for allowance.

If the Examiner believes it necessary or otherwise helpful, the undersigned attorney of record invites the Examiner to contact him at 651-686-6633 (x110) to discuss any issues related to this case.

Respectfully submitted,

Date: 6/1/05

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